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DD FORM 100-1009-5-63

12 AUG 1963

**MEMORANDUM FOR:** Director of Central Intelligence  
**THROUGH:** Deputy Director for Science and Technology  
**SUBJECT:** Soviet Supersonic Transport Aircraft Program

1. This memorandum is for information only.
2. In October 1962, OSI published a study on the Soviet supersonic transport aircraft (SST) development program, which concluded that the Soviets could achieve an operational date of 1966 with a Mach 2 transport based on the Boudier bomber design. This would be another "first" for propaganda purposes but would not be an economically sound aircraft. Information received since October 1962 adds significantly to our knowledge of the program and modifies our conclusions somewhat. We now believe that the Soviets may have underway two concurrent programs for developing a first generation (Mach 2) SST. They are probably continuing with the modification of the Boudier since this approach provides them with their best opportunity to be "first." In addition, there is evidence of work on the development of a basically new aircraft of improved design with an initial operational date (1969-73) similar to that projected for the U.S. and the British/French SST's. Also of interest, are inconclusive but

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logical indications of preliminary Soviet study related to a second generation (Mach 3) SST.

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3.

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They report that

Tupolev's design bureau is the one concerned with the SST program. Tupolev is said to have been working on an SST for six years and favors a Mach 2.2 "tailless" design of all aluminum structure and by-pass engines for the first generation vehicle. An overall impression was obtained that Tupolev's transport would not be ready until sometime in the 1969-73 time period.

4. V. M. Myasishchev, designer of the Boudier and the man formerly believed to be heading up the first generation SST program, is now reported to have been director of the Central Aerohydrodynamics Institute (TsAGI) since 1960 or 1961. Myasishchev's shift to TsAGI would appear to lessen the likelihood of a Boudier derivative as a first generation SST. Nevertheless, in view of the high level statements that the USSR would be first with an SST and the rather uncertain date of availability of Tupolev's "tailless" design, which coincides with the scheduled introduction of both the French/British "Concorde" and the American SST, it is believed the Soviets may not be relying on only the one program. This is particularly true if the by-pass engine is selected, since Soviet development programs for large by-pass

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engines have been beset with delays. Accordingly, it is concluded that, because of his long association with Tupolev, Myasishchev's former design bureau may have been taken over by Tupolev and that this organization is continuing with the development of Boudner. This is consistent with Soviet statements and is the only program which can assure them of the best opportunity for a "first."

5. Additional information elicited [REDACTED] indicates the Soviets have investigated canard configurations and have studied materials requirements for speeds in the Mach 3 range. They further reported that S. V. Il'yushin, a noted transport designer, voiced opposition to a supersonic transport. [REDACTED] reports of undetermined validity have associated Il'yushin with a second generation Mach 3 transport. We believe that Il'yushin has probably been assigned the task of studying the Mach 3 transport and perhaps performing some preliminary design work. He may oppose the project as a result of his study, but if so ordered, he will design and build the second generation vehicle. However, at this stage of development, it is probable that Tupolev, though primarily concerned with a Mach 2.2 design, is also studying a steel version of the aircraft which will be competitive with Il'yushin's Mach 3 design.

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25X1X 6. The lack of direct evidence on the development program, [REDACTED] configuration, and the design characteristics of the Soviet [REDACTED] transport precludes a definite estimate of the cost.

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The development cost of an SST is very high, and the production cost is two to three times that of a modern long-range jet transport.

7. If the Soviet SST is developed from the Boudar, the cost of the French-British Concorde program is indicative of the magnitude of the required expenditure for the Soviet SST, since the Concorde uses existing conventional aircraft structures and systems. The development cost of the latter is estimated to be 450 million dollars, and the average unit price excluding amortization of development costs is estimated to be between 7 and 10 million dollars for a production run of 130 to 170 aircraft.

8. If, however, the Soviet SST is a Mach 2.2 canard type capable of being developed to a Mach 3 capability, the estimated cost of the proposed U.S. SST is more indicative of the level of expenditure required. The estimated development cost of the U.S. aircraft is 700 million dollars, and the average unit delivered price, excluding amortization of the development costs, is estimated to range from 12 to 14 million dollars for a production run of 200 to 250 aircraft.

9. For your information, OSI provided support to other Government agencies during the period of this country's determination of its own supersonic transport program as follows:

9 April 1962

Briefing for the Director, International Aviation Service, Federal Aviation Agency and his staff.

31 May 1962

Briefing for the President's Scientific Advisory Committee

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1 March - 15 April 1963

[REDACTED] sat on a committee convened by the Department of State and provided a CIA intelligence contribution to a position paper for the Vice President of the United States.

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26 March 1963

Briefing for the Undersecretary for Transportation, Department of Commerce and his staff.

28 March 1963

Informal briefing for a special committee convened by the Federal Aviation Agency.

10. Copies of all publications on the Soviet supersonic transport program are submitted as attachments.

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*for* ALBERT D. WHEELON  
Assistant Director  
Scientific Intelligence

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Attachments (w/orig only):

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1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. Memo to DCI from DD/I
5. [REDACTED]
6. [REDACTED]
7. Psychological and Political Implications of U.S. Choices on the SST, 15 Apr 63

cc: DECI  
Executive Director

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OSI/DSD/ADE: [REDACTED] 1d1/7621 (9 Aug. 63)

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